

CLAIMSWe claim:

1. A system ~~for treating starch-based potato process water~~, comprising:
at least one ultrafilter in series with at least one reverse osmosis membrane.
- 5 2. The system of claim 1, wherein the at least one ultrafilter is two ultrafilters
in series.
3. The system of claim 1, wherein the at least one reverse osmosis membrane
is two membranes in series.
4. The system of claim 1, the at least one ultrafilter and the at least one
10 reverse osmosis membrane comprising a material made from a substantially non-
compacting material.
5. The system of claim 4, the at least one ultrafilter comprising an inorganic
material.
6. The system of claim 4, the at least one reverse osmosis membrane
15 comprising a high temperature material.
7. A system for treating potato process water, comprising:
at least one ultrafilter comprising an inorganic material; and
at least one reverse osmosis membrane comprising a high-temperature material.
8. The system of claim 7, wherein the at least one ultrafilter is two ultrafilters
20 in series.
9. The system of claim 7, wherein the at least one reverse osmosis membrane
is two membranes in series.

10. A substantially continuous method for treating potato process water,
comprising:

providing a source of potato process water containing potato particulates;

removing at least one suspended potato particulate; and

5 removing at least one dissolved potato particulate.

11. The method of claim 10, including removing the at least one suspended
particulate by ultrafiltration.

12. The method of claim 10, including removing the at least one dissolved
particulate by reverse osmosis.

10 13. The method of claim 10, the method producing a permeate stream
containing about 0.001 to about 0.1 wt% particulates and a concentrate stream containing
about 5 to about 25 wt% particulates.

14. The method of claim 13, the permeate stream containing about 0.01 wt%
particulates.

15 15. The method of claim 13, the concentrate containing about 20 wt%
particulates.

16. The method of claim 10, further including removing potato particulates
with a size larger than 20 mesh before removing the large particulates.

17. The method of claim 13, including recycling the concentrate stream into a
20 process for making dehydrated potato flakes.

18. A method for making dehydrated potato flakes, comprising:

providing at least one potato;

making a potato mash from the at least one potato using water or steam;

drying and flaking the potato mash;

collecting the process water resulting from the method of making the potato

5 mash, the process water containing potato particulates;

removing at least one suspended potato particulate; and

removing at least one dissolved potato particulate.

19. The method of claim 18, including removing the at least one suspended
particulate by ultrafiltration.

10 20. The method of claim 18, including removing the at least one dissolved
particulate by reverse osmosis.

21. The method of claim 18, the method producing a permeate stream
containing about 0.001 to about 0.1 wt% particulates and a concentrate stream containing
about 5 to about 25 wt% particulates.

15 22. The method of claim 21, the permeate stream containing about 0.01 wt%
particulates.

23. The method of claim 21, the concentrate containing about 20 wt%
particulates.

24. The method of claim 21, including recycling the permeate stream into the
20 method for making the potato mash.

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25. The method of claim 21, including recycling the concentrate stream and combining it with the potato mash.

26. The method of claim 18, including making the potato mash by making at least one potato piece and then ricing the at least one potato piece.

5 27. The method of claim 26, including recycling the concentrate stream and combining it with the at least one potato piece.

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